REMARKS

The present application has claims 1-19 pending. Claims 10-16 have been withdrawn from consideration in the present application, but not yet canceled. Applicants have herein amended claim 1 and canceled claim 2. The amendment to claim 1 is minor in nature and does not introduce any new matter. Claims 1, 3-9 and 17-19 are now under examination in the present application.

In the August 6, 2009 Office Action, the Examiner rejected the pending claims as allegedly anticipated by Hitomi, et al. (US Patent Publication 2002/0019308 A1). Applicants respectfully disagree with the Examiner's position.

Hitomi discloses an electrode for fuel cells that is made by dispersing a composite catalyst in a medium to prepare a paste. This paste is then applied (optionally) to a porous electro-conductive substrate such as a carbon fiber substrate, and the resulting coating film is dried (see Hitomi, para. [0075]). In this process, the catalyst is applied ***in film-form on the surface*** of the porous electro-conductive substrate. Hitomi states in para. [0076]:

> *"The structure obtained by forming a film from the paste on a porous electro-conductive substrate can be used by itself as an electrode"*

In other words, only a thin catalyst layer is formed and this layer is on the surface of the substrate.

Furthermore, it is clear from Figure 25 of Hitomi that the gas diffusion layer (layer 263 in Fig. 25) does not contain any catalyst particles. Rather, the catalyst particles are present in separate catalyst layer 261. See Hitomi, Figure 25 and paragraph [005].

In contrast to Hitomi, the present invention provides a catalyst-containing gas diffusion layer in which the catalyst particles are distributed uniformly over the entire

volume of the gas diffusion layer, not just on the surface. See the elements of independent claim 1.

In Hitomi, as discussed above, the catalyst particles are in a thin layer on the surface of the porous electro-conductive substrate. Moreover, as shown in Figure 25 of Hitomi, the catalyst particles are not even present in the gas diffusion layer of Hitomi -- let alone distributed uniformly throughout the volume of the layer as required by claim 1. Accordingly, Hitomi fails to disclose or teach all the elements of presently pending claim 1, and thus cannot anticipate the claim.

In the present invention, an optimal dispersion of the catalyst particles in the substrate is obtained, and very good access of the gaseous reactants to the catalyst particles is ensured (see the present specification, page 5, lines 4-6). A thick catalyst layer (identical to the thickness of the gas diffusion layer – typically in the range of 100-400 microns, see specification, page 6, line 34) is present in preferred embodiments of the invention, instead of a thin layer of catalyst on the substrate surface as utilized in Hitomi. This difference leads to improved performance versus the state of the art as explained on page 3, lines 24-28 of the specification.

Additionally, Hitomi is directed to providing catalysts of electron and proton conductivity for fuel cell reactions (see Hitomi para. [008]) – that is, electrocatalysts. The present invention, on the other hand, is preferably directed to gas-phase active catalysts (see page 3, line 24 and 28, and claims 7 and 8 of the application).

In sum, claim 1, as presently worded, is not anticipated (or rendered obvious) by the disclosure of Hitomi.

The remaining pending claims of the subject application depend from, and contain all the limitations of, independent claim 1. Accordingly, these claims are distinguishable from the Hitomi reference based on the same reasons presented above for claim 1.

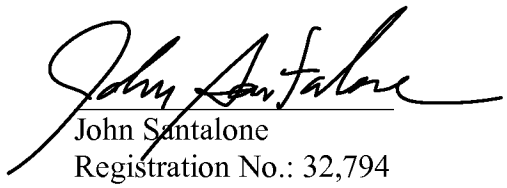
In light of the foregoing remarks and claim amendments, Applicants respectfully request withdrawal of the rejections set forth in the August 6, 2009 Office Action and

solicit allowance of the present application.

No fee is believed due in connection with the filing of the present amendment, other than the fee for the requested three-month extension of time. If any additional fees are due, or an overpayment has been made, please charge, or credit, our Deposit Account No. 11-0171 for such sum.

If the Examiner has any questions regarding the present application, the Examiner is cordially invited to contact Applicants' attorney at the number provided below.

Respectfully submitted,



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